

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-027352**Date Inspected:** 20-Mar-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG/Tower**Summary of Items Observed:**

At the start of the shift this Quality Assurance Lead Inspector (QAI) traveled to the SAS project site and observed the work and the inspection performed by American Bridge/Fluor Enterprises (AB/F) Quality Control (QC) personnel. The observations and inspections were performed as noted below:

A). This Quality Assurance Lead Inspector (QALI) assigned the QA Inspectors to the following, but not limited to the work station(s) listed , to observe the welding and the QC inspection of the following:

Joselito Lizardo-Tower, at the 9 Meter El. (Observed the welding, QC inspection and testing of diaphragm plate to shear plate, drop-in plates, fit lug plates and fit-up/tack welding of the stiffener plates).

Doug Frey-OBG W8, E9 and W9 (Observation of the welding and QC inspection and testing of the deck access holes and "A" deck longitudinal stiffeners) and OBG E8 (Observation of excavation, repair welding and QC inspection/testing at deck access hole plate).

Art Peterson-OBG E12/E13 field splice (Observation of welding and QC inspection of the deck stiffener plates to the "A" deck stiffeners), OBG E13/E14 field splice (Observation of welding and QC inspection of the "A" deck longitudinal stiffener), OBG E14 (Observation of the welding of the traveler supports in reference to punch list # 3724) and QA/NDE verification.

Skyway-No work

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NOTE: See QA daily Weld Inspection Reports (WIR) and NDE reports for additional information and details.

### Quality Assurance Lead Inspector (QALI) Summary

This QA Lead Inspector (QALI) observed the QA Inspector's Joselito Lizardo, Doug Frey and Art Peterson monitor the work performed by the QC inspectors at random intervals and also observed the QA Inspectors verify the welding parameters, the minimum preheat and the maximum interpass temperatures for compliance with the contract specifications. The QAI's utilized a Fluke 337 clamp meter to measure the electrical welding parameters, Tempil Heat Indicators and/or a Fluke 63 IR Thermometer for verifying the preheat and interpass temperatures. At the conclusion of the shift, this QA Lead Inspector discussed and reviewed the work performed by the QAI's in regards to the various observations and the verifications of the WPS's, consumables, welding parameters, preheat and interpass temperatures. The QAI observations of the QC inspection and verification of the welding parameters performed on this date appeared to comply with the contract specifications and no issues were noted.

Tower/13 Meter El.

The QAI also observed the continued Submerged Arc Welding (SAW) process of the diaphragm plate identified as Weld Number (WN): W128. The welding was performed by the welding operators Dan Ieraci ID-3232 and James Zhen ID-6001 utilizing the Welding Procedure Specification (WPS) ABF-WPS-D15-4062-1 Rev. 0. The WPS was also used by the Quality Control (QC) Inspector, Fred Von Hoff, to monitor the welding and to perform QC inspection for compliance. The QAI observed Mr. Von Hoff verify the welding parameters and were noted as follows: 552 amps, 32.5 volts and a travel speed measured at 382 mm per minute. The calculation of the heat input was also noted as 2.82 kJ/mm by the QC inspector. The minimum preheat temperature of 140 degrees Celsius and the maximum interpass temperature of 230 degrees Celsius, in progress welding and QC inspection appeared to comply with the contract specifications. The welding of this weld joint was completed during this shift.

### QAI Note:

This QAI generated an Ultrasonic Test (UT) report, on this date, identified as TL-6027 for the weldment noted as 13W-PP118.2-E5. The QA/UT verification of this weld was performed on March 06, 2012 but was inadvertently omitted on the TL-6027 by this QAI.

This QALI continued the daily review of field inspection reports and update of the field document control tracking records regarding the Orthotropic Box Girders (OBG, Longitudinal and Transverse "A" Deck Stiffeners, Deck Access Holes and the Tower Shear plates).

### Summary of Conversations:

There were general conversations with Quality Control Lead Inspector, Bonifacio Daquinag, Jr., at the start of the shift regarding the location of welding, inspection personnel scheduled for this shift.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910, who represents the Office of Structural Materials for

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your project.

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**Inspected By:** Reyes,Danny

Quality Assurance Inspector

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**Reviewed By:** Levell,Bill

QA Reviewer